

XVII.—Notes on the Coleopterous Subfamily Dynastinae, with Descriptions of new Genera and Species. By GILBERT J. ARROW.

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[Plates IV. & V.]

WHILE compiling a Catalogue of the Dynastinae, to be published shortly, I have had occasion to make various synonymical and other notes, and these are here recorded, together with descriptions of a few of the new species contained in the collection of the British Museum.

In Gemminger and Harold's Catalogue the name *hewitsoni*, Empson, is given as a synonym of *Golofa porteri*, Hope, with a reference to Maunder's 'Treasury of Natural History' (1858). In that work it is said that the insect has received the name *Asserador hewitsoni* in Empson's 'Narrative of S. America.' This work, having been published in 1836, would, if the statement were correct, antedate both the generic and specific names given by Hope in 1837. I have therefore with considerable care searched Empson's 'Narrative' page by page in the British Museum library, and have satisfied myself that the name quoted does not occur there. Thomson, in his 'Arcana Naturæ,' has stated that the name *Asserador hewitsoni* appears upon an isolated plate, without description. A note in the 'Narrative' mentions that a portfolio of facsimile sketches was purchasable, but these I have not been able to discover; and as it seems certain that no description of *hewitsoni* appeared before the publication of Maunder's 'Treasury,' Hope's names, so long current, may, I think, remain undisturbed. A specimen bearing Empson's proposed name, and apparently his original, is still in our collection.

It is, perhaps, scarcely necessary to say that the various "new species" of *Dynastes* from Dominica named by Mr. A. H. Verrill in his curiously inaccurate papers in the 'American Journal of Science' of 1906 and 1907 indicate nothing more than different phases of male development of the very well-known and variable *Dynastes hercules*, L. His *Dynastes tricornis*, as the writer has already discovered, is a *Strategus*. The name *tricornis* has been long preoccupied, but the "new species" is probably *S. vulcanus*, F. The long-familiar species *Strategus tricornis*, Jabl., should, however, be called *S. validus*, F., a name which has been overlooked. The type of Fabricius (described in his Syst. Ent. 1775, p. 6) is a female in the British Museum.

Stypotrupes endymion, Oliv., of which the original examples are in the British Museum, is a *Strategus* with the head of the male peculiarly modified, the end of the clypeus being produced upwards as a broad lamina. Burmeister, the author of the genus, was entirely mistaken as to its affinities, and the genus is an especially unsatisfactory one, being based upon the present species, the totally different one for which I have already made the genus *Clyster*, and a third, of which only a fragment is known, and which, if, as supposed, it is Oriental, is certainly also very different. A female of *S. endymion* in the Museum was apparently brought by Darwin from the Galapagos Islands, and there can at least be no doubt that the insect belongs to the American fauna. The female shows so intimate a relationship to *Strategus* that I think the advisability of treating the species as a member of that genus will hardly be disputed. A difference is generally found in the sculpture of the propygidium in the two sexes of *Strategus*, and this is accentuated in *S. endymion*, the male of which has rather fine stridulatory ridges, which in the female are represented by very coarse scattered granules.

By a process of elimination the unknown *S. telamon*, Burm., is now left alone to represent the genus *Stypotrupes*. Its identity can only be established by examination of the fragmentary type in M. Oberthür's collection.

Enema pan, F., is a remarkable polymorphic species, concerning which perplexity still prevails. Bates, in the 'Biol. Centr.-Americana,' has figured the female form (called *titornus* by Perty) as a male, calling it the variety *lupercus*, Chev., which is really the reduced male phase. In the same work he expressed a strong suspicion that *Enema infundibulum*, Burm., is a form of this species, but without actually putting them together. Herr Sternberg has described them as two forms of a vanished species, which seems to be a way of saying two species of the closest affinity. It appears to me that the evidence is entirely in favour of regarding them as actually conspecific, *infundibulum* being the extreme phase of development of the male armature. The two forms occur in the same localities from Central America to South Brazil, but, abundant as they are, only a single form of female is found. I have examined the male genitalia, and found no difference.

It is very remarkable that, whereas in the typical form every grade of armature is found, from the highest to a degraded form little distinguished from the female, no intermediates connecting it with the differently armed *infundibulum*

form are known; but the difficulty is not less if the latter is treated as a distinct species, for I know of no instance of a species with very highly developed male armature of which amongst numerous examples none of low development are found.

In Redtenbacher's description of the isolated and interesting insect named by him *Myrina pfeifferi* the length is given as 47 lines, apparently a misprint for 17 lines. The series in the British Museum vary from 28 to 35 mm. long.

It is worthy of notice that in this peculiar insect the front claws of the male assume a form which, so far as I know, is unique. They are very strong and broad and double at the tip, but instead of one claw only being cleft into two sharp points, as is not unusual in certain groups of Dynastinae, the true tip of each claw forms a slight finger-like process, while the lower division is a rounded lobe or flange. The entire inner surface of the claws, as in many other species, is covered with fine oblique striations.

This interesting Oriental insect has a striking resemblance to the Tropical American *Megasoma*. A marked difference between them is in the development of the prosternum of *Myrina*. The latter name being a doubly preoccupied one, I propose to substitute for it

ALLOMYRINA, nom. nov.

The insect called by Fairmaire *Oryctes melanops* in the Ann. Soc. Ent. France, 1881, p. 258, is entirely different from the real *Oryctes melanops* of Burmeister, which, as Herr Prell has suggested to me after comparison of a long series of specimens, is probably only a variety of *Haploscapanes barbarossa*, F. Fairmaire's insect is a *Trichogomphus* very closely related to *T. semmelinki*, Rits., and for the sake of clearness it seems desirable to name it. It may be called

Trichogomphus fairmairei, sp. n.

It is rather shorter and stouter than *T. semmelinki*, with the prothorax more transverse, but the puncturation is almost exactly the same. The only male specimen in the British Museum, like that described by Fairmaire, seems to be of low development, although this is possibly characteristic. The cephalic horn is short and simply acuminate, and the pronotum bears only a slight double median prominence and an acute lateral tubercle on each side of the

broad excavation. The female has two very inconspicuous tubercles behind the middle of the front margin of the prothorax. The species has already been described at greater length by Fairmaire.

The identity of *Oryctes ingens*, Kolbe, and *Dimyrus cram-peli*, Fairm., with *Oryctes cristatus*, Voll., has been pointed out by Messrs. Sternberg and Felsche. It has not been noticed, however, that a still older name exists, viz. *Oryctes gigas*, Cast.

Herr Sternberg has rightly distinguished *Xyloryctes telephus*, Burm., and *ensifer*, Bates (which he has renamed *X. lævipennis*), which were not properly discriminated by Bates, who attributed both to the same localities. The examples of *X. telephus* in our collection are from Jalapa and Oaxaca, while *X. ensifer* has been brought from Jalapa, Cordova, Chiapas, Omilteme, S. Luis Potosi, and also from Chuipache, Quezaltenango (Guatemala).

In the 'Fauna of India, Lamellicornia,' lately published, I have referred to *Dipelicus* the species described as *Horonotus* and *Camelonotus*. *H. deiphobus*, Sharp, forms a connecting-link between the larger well-punctured species represented by *D. cantori*, Hope, and the smaller smooth forms of the *montrouzieri* group. The actual habitat of *D. deiphobus* was unknown to Sharp, but specimens from the Philippine Islands were determined by Waterhouse by comparison with a typical example from Dejean's collection, and I have lately received it from Sarawak, Borneo.

D. cantori was described from a female supposed to have come from China, but the type in the British Museum appears to agree sufficiently with that of the Javan species described and figured under that name by Waterhouse. The following is closely related:—

Dipelicus borneensis, sp. n. (Pl. IV. figs. 1, 2, 3.)

Niger vel nigro-piceus, corpore subtus rufescente, pectore haud longe rufo-hirto, elongatus, robustus, valde convexus; clypeo rotundo acuminato; prothorace transverso, postice leviter lobato; scutello rugoso, margine angusto, levi; clytris grosse et crebre annulato-punctatis, lineis tribus discoidalibus geminatis; propygidio retrorsum producto, late subtiliter striato; pygidio brevi:

♂, capite cornu erecto curvato, basi lato, apice acuto, armato; pronoto late excavato, fossæ lateribus fere rectis, antice breviter productis, margine postico bispinoso, spinis sat approximatis, lobo

postico modice prominenti, integro, pronoto postice et lateraliter omnino rugoso; propygidio valde retrorsum producto; pygidio minuto et crebre granulato:

♀, prothorace valde convexo, grosse rugoso, margine antice medio minute retrorsum dentato; propygidio modice producto, pygidii lateribus subtiliter rugosis, medio nitido, parce punctato.

Long. 37-41 mm.; lat. max. 19-21 mm.

Hab. BORNEO: Sarawak, Kina Balu.

D. borneensis is very closely related to *D. cantori*, Hope, but is rather more strongly and coarsely sculptured above, and has the thoracic cavity of the male a little less deep, its side walls nearly straight, the anterior processes short, the two dorsal processes placed rather close together, the dorsal lobe short, not notched in the middle, and without a smooth depression on each side. The females of the two species are exceedingly similar, but that of *D. borneensis* has the pronotum rather more convex and more coarsely sculptured, with the front marginal carina minutely angulated in the middle. In both sexes, in addition to the more coarsely sculptured elytra, the scutellum is rugose, except a very narrow outer margin, while in *D. cantori* it is smooth and shining.

Dichodontus hexagonus, Rits., is the female of *D. coronatus*, Burm., wrongly attributed to Malabar. This is one of the female Dynastinae having at first sight all the appearance of a male. The unnecessary multiplication of names in the Lamellicornia is inevitable so long as the sex of specimens described is not first ascertained with certainty.

Dichodontus fissicornis, sp. n. (Pl. V. figs. 1, 2, 3.)

Rufo-piceus, nonnunquam niger, modice elongatus, pectore breviter rufo-hirto, clypeo toto rugoso, antrosum angustato, margine antice recto, angulis minute rotundatis; prothorace antice a medio valde attenuato, angulis acutis, posticis obtusis, haud arcuatis, margine basali leviter trisinuato; scutello utrinque oblique sulcato, basi leviter ruguloso; elytris grosse, haud profunde, punctatis, postice plus minusve laevigatis, linea tenui suturali incisa:

♂, capite cornu gracili, valde curvato, ante medium paulo compresso, apice minute dilatato atque bifido, armato; prothorace postice medio late elevato, summo fere horizontaliter antrosum producto, processu sat angusto, apice emarginato-truncato, thoracis superficie medio (processus latere inferiori excepto) laevi, lateribus grosse lunulate strigosis, marginibus lateralibus medio angulatis, antice valde, postice leviter, approximatis; elytris antice fere obsolete punctatis, postice fere laevibus; pygidio basi denso rugoso, medio crebre, apice parce, punctato:

♀, capite postice minute tuberculato; prothorace convexo, antice vix impresso, grosse et confluentem punctato, spatio subcirculari postico nitido, parce et minute punctato, lateribus antice valde approximatis, postice fere parallelis: elytris grosse sublineare punctatis; pygidio segmento ultimo ventrali dense et æqualiter rugosis, breviter rufo-setosis.

Long. 24-32 mm.; lat. max. 14-18 mm.

Hab. BORNEO: Sarawak; SINGAPORE.

This is nearly related to the Javan *D. cræsus*, F., but is a little smaller, the cephalic horn of the male in well-developed specimens is longer, more strongly curved, and bifid at the end, and the median process of the thorax is narrower. In a small male from Sarawak the cephalic horn is short and not at all bifid and the prothorax is abruptly vertical in front but not produced into a horn. The female has only a small tubercle upon the head, and is shorter, broader, and much more strongly punctured than the male.

Burmeister has bestowed upon a West-African species the name of *Phyllognathus bacchus*, but as the latter name was previously used by Mulsant for a variety of the European *Phyllognathus silenus*, its re-use is not admissible, and I have therefore changed the name of Burmeister's insect to *P. burmeisteri*.

I have found by examination of the type, now in the Oxford Museum, that the insect supposed by Burmeister and Lacordaire to be *Bothynus ascanius*, Kirby, is quite a different species with a very strong prothoracic tubercle and large and deep excavation in the male, and distinctly striated elytra. The false *Ascanius* with almost smooth elytra must be called by the name given to the female, *Bothynus medon*, Germ.

The genus *Corynoscelis* cannot, in my opinion, be retained as distinct from the older *Bothynus*, the females being practically inseparable. *Bothynus monstrosus*, Bates, is only a deformed specimen of *B. simplicitarsis*, Bates; and *Cratocnemus niger*, Blanch., which Lacordaire thought possibly a female specimen of *Thronistes*, seems to me to be more probably a *Bothynus*.

Semanopterus depressus, Hope, and *subæqualis*, Hope, are, I believe, synonyms of *S. (Phaleurus) subcostatus*, Cast., Hist. Nat. Ins. ii. 1840, p. 116.

PAPUANA, gen. nov.

Corpus breviter cylindricum. Caput triangulare, cornutum ant tuberculatum. Clypeus truncatus. Mandibulæ detectæ, extu

uni- aut bi-incisæ. Mentum antice angustatum. Prosternum postico elevatum, truncatum, longe ciliatum. Pedes sat longi, tarsi antici breves. Tibiæ anticæ quadri- aut tri-dentatæ, posteriores truncatæ, longe spinosæ, tarsorum posticorum articulo primo triangulari.

♂. Caput cornutum. Prothorax antice retusus, plus minusve cornutus. Pedis antici unguis internus distortus.

Two species of this genus were described by Fairmaire under the name of *Pimelopus* (*P. hubneri* and *armicollis*), to which genus it is nearly related, differing in the more triangular head, truncate clypeus, and less abbreviated legs, of which the front tibiæ are four-toothed and the middle and hind tibiæ much less dilated from base to apex and fringed with long, not closely-set spines.

I have seen several species, all from the islands of Papua and Polynesia. The following is the typical species :—

Papuana semistriata, sp. n. (Pl. IV. figs. 4, 5, 6.)

Nigra vel piceo-nigra, nitida, pectore parce rufo-hirto; clypeo utrinque acute angulato, subtilissime punctulato, vertice utrinque rugoso; prothorace antice retuso, rugoso, dorso medio acuminato, angulis anticis acutis, posticis obtusis, basi trisinuato; scutello lævi; elytris fortiter striatis, striis annulate punctatis, suturalibus integris, reliquis postice abbreviatis, lateribus apicibusque fere lævibus; mandibulis valde porrectis, extus parum profunde uni-incisus :

♂, capite cornu gracili, antice planato, apice obtuso, armato; prothorace postice lobo elevato, summo acuminato, tuberculoque utrinque parvo, interdum obsoleto, munito, margine antico lateribusque, spatio laterali carina brevis arcuata delimitato excepto, rugosis, superficie reliqua lævi (individuum maximum autem cornu basi antice etiam rugoso); pygidio punctato, medio fere lævi :

♀, capite tuberculo lato armato; prothoracis medio leviter acuminato, antice rugoso; pygidio crebre et minute punctato.

Long. 22–28 mm.; lat. max. 12–14 mm.

Hab. BRITISH NEW GUINEA: Fly River; AMBOINA.

This is a larger species than *P. hubneri* and *armicollis*, Fairm., with more highly developed armature, although the latter is, of course, subject to great variation. The female, both in this and the following species, appears always to have a retuse and rugose area in the anterior part of the pronotum and a feeble but sharp elevation at the middle. The mandibles, in both sexes, are much more produced forwards and have only a single slight notch at the side. The elytra of *P. semistriata* are coarsely punctate-striate, the striae,

with the exception of the sutural one, vanishing behind the middle. In large males the rugose area of the pronotum extends from the front to the hind margin on each side, but does not include the whole lateral part.

Papuaea levipennis, sp. n.

Nigra, nitida, sat lata, pectore parce rufo-hirto, clypeo utrinque acute angulato, subtiliter punctulato, vertice utrinque rugoso; prothorace antice retuso, utrinque rugoso, dorso medio acuminato, angulis anticis acutis, posticis obtusis, basi trisinuato; scutello lævi; elytris latis, lævibus, stria suturali profunda, indistincte punctata; mandibulis valde porrectis, extus parum profunde uni-incisis:

♂, capite cornu gracili antice planato, apice obtuso, armato; prothorace postice lobo elevato, summo acuminato tuberculoque utrinque parvo, interdum obsoleto, munito, margine antico lateribusque, spatio posteriori carina arcuata delimitato excepto, rugosis, superficie reliqua lævi (individuum maximum autem cornus basi antice etiam rugosa); pygidii lateribus crebre punctatis, medio lævi:

♀, capite tuberculo lato armato; prothorace medio leviter acuminato, antice rugose punctato, postice subtilissime parce punctulato; pygidio minute et crebre punctato.

Long. 20–29 mm.; lat. max. 11–16 mm.

Hab. SOLOMON ISLANDS: Kieta.

This is extremely like *semistriata*, with which it agrees in all its structural details, but it is shorter and broader in proportion and the elytra are very smooth, with only a single sutural stria upon each.

Papuaea tridentipes, sp. n.

Nigra, nitida, modice elongata, subtus picea, parcissime rufo-hirsuta; capite rugoso, clypeo antice sat lato arcuato, utrinque minute reflexo-angulato; prothorace nitidissimo, vix perspieuo punctato, lateribus fortiter arcuatis, angulis anticis acutis, posticis obtusissimis; scutello lævi; elytris grosse striato-punctatis, punctis annulatis, apicibus crebre et aequaliter punctatis; pygidio grosse rugoso-punctato; tibiis anticis acute tridentatis; mandibulis extus trilobatis:

♂, capite medio cornu parvo, recurvato, sat gracili armato; prothorace antice retuso, postice lato producto, lobo utrinque breviter acuminato, lateribus pone angulos anticos obtuse ascendentibus; pygidio convexo; tarsorum anticorum ungue interno lato, haud acuto, integro:

♀, capite medio minute bituberculato; pygidio ante medium transverse carinato.

Long. 17–21 mm.; lat. max. 9–11 mm.

Hab. TROBRIAND Is.: Kiriwini (*A. S. Meek*).

Herr C. Felsche has received a series of specimens, of which he has kindly presented a pair to the British Museum. The species is smaller than those just described and differs from all hitherto known in having only three teeth to the front tibiae. It is very smooth and shining above, with the elytra and the pygidium very strongly punctured. The male has a short but slender horn on the head and the pronotum is horizontally produced into a short broad lobe, sharply pointed on each side. The lateral margins also bear a blunt prominence on each side a little behind the front angles.

Pseudohomonyx crassus, sp. n. (Pl. V. fig. 6.)

Niger, nitidus, elongatus, pectore abdominisque lateribus rufo-hirsutis, capite sat æqualiter transversim plicato, clypeo antice attenuato, truncato; prothoracis lateribus tenuiter punctatis, antice paulo fortius, anguste marginatis; scutello vix punctato; elytris grosse punctato-striatis, stria secunda antice, 4^a et 5^a postice, abbreviatis, apicibus irregulariter grosse punctatis; pygidio antice punctato, postice lævi:

♂, prothorace antice sat late impresso, margine antico acute tuberculato; pygidio antice confuse annulato-punctato:

♀, prothorace omnino lævi; pygidio lateraliter grosse, medio subtiliter, punctato.

Long. 21-24 mm.; lat. max. 11.5-13 mm.

Hab. N. BORNEO: Kina Balu, Labuan I., Sanga Sanga.

This is a species very closely related to *P. borneensis*, Arrow, but rather larger, with finer lateral margins to the pronotum and the elytral striae coarse but less deep. The pygidium is also much less strongly sculptured in both sexes, with its apical half smooth and shining. The male has a much larger and deeper impression on the pronotum, about as wide as it is long, and a sharp conspicuous tubercle in front of it.

Labuan I. was erroneously included as a locality for *P. borneensis*.

Prof. Kolbe has proposed the name *Heteroligus* for various species formerly included in the genus *Heteronychus*, but which seem to me to include three well-marked generic types. As in the case of other genera created by him, Prof. Kolbe has contented himself with a very casual and fragmentary reference which affords no means of determining to which of these types his name ought to be applied. I therefore select as the type of *Heteroligus* the first enumerated and

commonest of the species mentioned by him, *H. claudius*, Klug, which, in my opinion, is the earlier described *H. meles*, Billb. A small, but peculiar, feature of this species is worthy of mention. The sexes of the Dynastinae (and Rutelinae) are almost invariably distinguishable by the form of the last ventral segment, which in the female is longer and more pointed behind than in the male. In the latter the apical part appears to be excised and replaced by a shining quasi-transparent membrane. In the male of *Heteroligus meles* this segment is narrow and the terminal membrane is broad and conspicuous. In the female, contrary to the usual condition, there is also an apical excision and membranous filling, but the excision is much narrower than in the male and its form is very curious, a bilobed process from the middle of its edge dividing it into two parts, which are fringed with stiff hairs.

This species is common in Sierra Leone and Nigeria, and extends eastwards as far as Uganda. Mr. Péringuey has described under its name (*H. claudius*, Klug) a form from Damaraland, but, as shown by the figure of its œdeagus, that is another species. It appears to be different from *H. brevis* and *geotrupinus* of Quedenfeldt, both of which are considerably smaller. It must therefore be renamed, and I propose to call it *H. péringueyi*.

The following is very closely related, but again distinct :—

Heteroligus gazanus, sp. n.

Piceus, subtus parce rufo-hirtus, ovatus, crassus, capite omnino ruguloso, tuberculis duo frontalibus distantibus, clypeo modice angustato, antice arcuato, prothorace undique crebre punctato, disco subtilius, tuberculis duo geminatis paulo ante marginem anticum; scutello paulo irregulariter punctulato; elytris crebre irregulariter punctatis, lineis quatuor indistinctis duplicis striaque suturali profunda, propygidio parum subtiliter transverse striato, pygidio parce subtilissime punctulato, angulis anticis crebre rugulosis:

♂, segmento ultimo ventrali brevi, late membranaceo:

♀, segmento ultimo ventrali longiori, apice anguste et simpliciter emarginato.

Long. 32–35 mm.; lat. max. 19 mm.

Hab. GAZALAND: Chirinda.

A pair has been presented by Mr. G. A. K. Marshall. This species has the closest possible resemblance to *H. meles*, from which the sexual characters referred to distinguish it most surely. The elytra are rather more coarsely and irregularly punctured and the smooth longitudinal lines

indistinct. The frontal tubercles of the head are more distant from one another. The œdeagus of the male is more like that of *H. périnqueti* than of *H. meles*, but is broader and without pointed processes in its anterior part.

Heteronychus glabricollis, Burm., included in *Heteroliquis* by Prof. Kolbe, belongs to the genus *Cyphonistes* (= *Cephisodotus*, Fairm.), in which the front tibia is simply three-toothed and the front tarsi of the male are thickened. *Cyphonistes impressicollis*, Fairm., is apparently a synonym of the last.

Heteronychus capreolus, Qued., another insect placed by Prof. Kolbe in *Heteroliquis*, is one of a group of species having well-marked characters in common for which another genus must be formed. The best-marked features are the truncate clypeus with spinose anterior angles and the very sharp, recurved teeth at the outer edge of the mandible. The species seem to be characteristic of the West African fauna. I propose to call them

PRIONORYCTES, gen. nov.

Corpus convexum, subcylindricum. Clypeus brevis, lateribus convergentibus, antice truncatus, angulis acute et oblique spinoso-productis. Mandibulæ extus profunde incisæ, dentes tres acutas, valde recurvatas, utrinque instructæ. Maxillæ fortiter 6-dentatæ, dentibus 4 inferioribus geminatis, palporum articulo ultimo magno, truncato. Mentum antice profundo fissum, palporum articulo penultimo transverso. Mesosternum medio erectum, subcylindricum, summo truncato. Tibiæ anticæ acuto quadri-dentatæ. Tibiæ posticæ extus apice dentibus circiter sex obtuse dentatæ. Propygidium striis stridulatoriis medio obsoletis sat late incisum. Tarsorum posticorum articulus primus supra productus. Mas et fœmina visu vix dissimiles.

I refer to this genus, in addition to *Heteronychus capreolus*, the three following species, the first of which may be regarded as the type.

Prionoryctes rufopiceus, sp. n.

Rufo-piceus, subtus breviter rufo-hirsutus, capito toto rugoso, fronte medio leviter depressa, tuberculis duobus sat remotis armata; prothorace grosse, fero æqualiter, punctato, omnino marginato; scutello inæqualiter punctato; elytris annulato-punctatis, lineis punctorum quatuor geminatis striaque suturali profunda, interstitiis minute marginibusque externis confuse punctulatis;

♂, pygidio modice convexo, nudo, subtiliter coriaceo: pedis antici ungue interno basi dentato:

♀, pygidio deplanato, transverse striolato et parce irregulariter punctato, punctis setiferis.

Long. 29-32 mm.; lat. max. 15-16 mm.

Hab. S. NIGERIA: Calabar, Gaboon.

The species was found by Du Chaillu in the Gaboon region and has been more recently taken by Col. F. Winn Sampson. It is the largest known to me and of a deep red colour, all the others being black. There is no trace of depression or tubercles behind the front margin of the pronotum. The punctures of the elytra are large and annular, and the intervening spaces are finely, but quite distinctly, punctulated. The outer margins are rather irregularly dotted with fine punctures only.

The inner claw of the front tarsus of the male of this species bears a small tooth beneath. The sexes also differ in the pygidium, which is more flattened and pointed in the female and transversely striolated, with scattered punctures bearing short erect setæ, while in the male it is convex, bare, and coriaceous.

Prionoryctes caniculus, sp. n.

Elongatus, niger, nitidus, corpore subtus breviter rufo-hirsuto, capite omnino rugoso, fronte medio leviter impressa, tuberculis duobus sat remotis instructa; pronoto toto marginato, grosse punctato, medii postice punctis paulo magis subtilibus, ante marginem anticum tuberculis duobus connatis fere obsoletis instructo; scutello leviter punctato; elytris grosse punctatis, lineis quatuor geminatis striaque suturali profunda, interstitiis sat crebre marginibusque externis creberrime punctulatis:

♂, pygidio convexo, nudo, subtiliter coriaceo.

Long. 28 mm.; lat. max. 13.5 mm.

Hab. S. NIGERIA: Calabar.

A single male specimen has been presented by Col. F. Winn Sampson to the British Museum. It has the form but not the colour of *P. rufopiceus*, and is also differently punctured. The lines of large punctures upon the elytra are stronger and deeper, and the microscopic punctulation of the surface between the punctures at the lateral and apical margins is finer and closer. It is also distinguishable by the vestiges of a pair of tubercles behind the front margin of the pronotum, but there is no punctured depression as described in *P. capreolus*, Qued., nor is there a smooth median line extending to the posterior margin. The

inner claw of the front tarsus is not toothed as in the male of the last-described species.

Prionoryctes brevisculus, sp. n.

Breviter cylindricus, postice paulo ampliatus, niger, nitidus, corpore subtus piceo-rufo, breviter rufo-hirsuto; capite omnino rugoso, fronte medio leviter impressa, tuberculis duobus sat remotis armata; prothorace toto marginato, grosse punctato, medii postice punctis paulo magis subtilibus, ante marginem anticum tuberculis duobus connatis fere obsoletis instructo; scutello paulo punctato; elytris punctatis, lineis quatuor geminatis striaque suturali profunda, interstitiis disperse marginibusque externis creberrime punctulatis; pygidio crebre et minute coriaceo:

♀, pygidio basi breviter setoso.

Long. 22·5 mm.; lat. max. 12·5 mm.

Hab. S. NIGERIA: Lagos (*Ussher*); LIBERIA (*A. McCloy*).

The Museum contains one specimen of each sex.

This is the smallest known species and has a rather short and compact form, the elytra broadest a little before the extremity. It is black above and strongly and deeply punctured, with very fine punctulations scantily sprinkled between the large punctures of the elytra, but densely crowded at the outer margins. The pygidium is convex and coriaceous in both sexes, and the puncture-bearing setae in the female are confined to the base, and not, as in *P. rufopiceus*, scattered over the surface. The inner front claws of the male are not toothed.

In constituting his genera *Prospileurus* and *Archophanes* Prof. Kolbe has omitted any reference to their sexual characteristics, perhaps because he knew only one sex. The latter genus exhibits almost the highest developed armature found in female Lamellicornia. A close similarity between the sexes is a feature of the group Phileurini, which is principally American, but the armature is generally little developed in the group. In the allied Oriental forms for which I have made the genus *Eophileurus*, and in most of the related African genera (e. g. *Rhizoplatys*), differences appear both in superficial configuration and in the front tarsi, and it is interesting to find Phileurini strayed so far from the metropolis of the group in which the armature is exceptionally developed and yet not sexual. The females of *Archophanes cratericollis*, Fairm., and *Prospileurus poggei*, Har., and especially the former, are remarkably male-like. Both species seem to have a very wide range, the first extending

from the Cameroons to Uganda and the second from Sierra Leone to Angola.

Certain insects of this group which inhabit Madagascar do not belong to any existing genus; for these I constitute the following:—

Hovophileurus, gen. nov.

Corpus elongatum, cylindricum. Caput triangulare, clypeo acuminato, apice reflexo. Mandibula extus obtuse dentata, apice acuminata, reflexa. Maxilla longe ac dense pilosa, dentibus duobus geminatis acutis inferioribus armata. Mentum elongatum, parabolicum, antice constrictum et bilobatum. Prosternum antice paulo acute productum, postice erectum, truncatum. Tibia antica acute tridentata, posteriores apice dilatatae, multidentatae et setiferae. Tarsorum posticorum articulus basalis extus fortiter productus. Propygidium absque striis stridulatoriis.

♂. Tarsi antici articulus ultimus inflatus, ungue interno profunde bifido.

The genus is intermediate between *Phileurus* and *Rhizoplatys*. One of its species, *Hovophileurus sulcicollis*, Fairm., has been placed in the latter, but has not its principal diagnostic feature, viz. the dilated mentum partially concealing the palpi. The serrate extremities of the hind tibiae and the erect and truncate prosternal process also distinguish the new genus. In addition to *H. sulcicollis*, Fairm., the two following species are in the British Museum:—

Hovophileurus sulcipennis, sp. n.

Niger, nitidus, modice convexus, corpore subtus brunneo-piloso, capite ruguloso, antice acute producto, vertice medio tuberculato; pronoto undique parum æqualiter punctato, lateribus fortiter arcuatis, angulis anticis acutis productis, posticis obtusissimis sed vix rotundatis, dorso antice excavato, utrinque paulo acuminato, fossa laxo rugosa: scutello antice rugoso; elytris profunde sulcatis, sulcis annulato-punctatis, interstitiis inæqualibus, 2°, 6° et 8° latis, grosse punctatis, reliquis lævibus, alte convexis, apicibus planatis, grosse et crebre punctatis; metasterno sat dense rufo-hirto:

♂, pygidio valde convexo, æqualiter crebre rugoso:

♀, pygidio minus convexo, apice subnitido.

Long. 18–22 mm.; lat. max. 9·5–11·5 mm.

Hab. N. MADAGASCAR: Diego Suarez.

The type in the British Museum is a male, and I have seen

a female from Dr. Sicard's collection. Except in the anterior claws the sexes differ little, but the pygidium of the female is less convex and less finely and evenly rugose than that of the male. The prothorax has in both sexes a deep median excavation which occupies nearly a third of the breadth of the thorax and has its walls slightly acuminate on each side in front. The elytra are deeply grooved, with large annular punctures in the grooves and similar ones upon some of the interstices, which are broader and less elevated than the rest. The metasternum is less densely hairy than that of *H. sulcicollis*, Fairm., but much more so than in the following species.

Hovophileurus canaliculatus, sp. n.

Niger, parum nitidus aut convexus, abdomine fusco-rufo, corpore subtus parcissime hirsuto; capite leviter ruguloso, antice acuto producto, vertice medio tuberculato; pronoto toto fortiter sat crebre punctato, lateribus valde arcuatis, angulis anticis acutis, posticis obtusis sed bene indicatis, medio profunde et angusto canaliculato; scutello grosse punctato; elytris toto rugose punctulatis, profunde striatis, striis plus minusve crenatis, interstitio secundo antice et postice, 4° postice, 6° toto grosse seriatim, 8° et 10° irregulariter punctatis, apicibus planatis, grosse et crebre punctatis, metasterni lateribus crebre punctatis, parce pilosis: pygidio dense rugoso.

Long. 19 mm.; lat. max. 9 mm.

Hab. N. MADAGASCAR: Diego Suarez.

The only specimen I have seen is a female in the British Museum. The prothorax has only a narrow median groove, its posterior angles are well-marked, the elytra have a close microscopic punctulation which produces a less shining appearance than that of the other two species, and the lower surface is only very scantily clothed with hair.

Pentodon australis, Blackb., cannot be allowed to remain in that essentially Palearctic genus, to which its relationship is rather remote. It has the aspect and general characters of *Heteronychus*, from which it differs in the absence of stridulatory striae upon the propygidium. Its nearest ally seems to be *Heteronychus australis*, Fauvel, described many years earlier from the female alone and inhabiting New Caledonia. The two species agree in having the glossy unpunctured pronotum, the thickened front tarsi in the male and other features of *Heteronychus*, as well as in the want of

stridulating apparatus, and I propose to put them together in a new genus, to be called

METANASTES, gen. nov.

The typical species is *M. australis*, Fauvel, and to avoid the double employment of the same name the later-described Australian insect must be renamed *M. blackburni*.

In the hitherto unknown male of *M. australis* the head has a single (instead of paired) tubercle and a rather deep pit behind it. No such sexual difference is found in *Heteronychus*, nor does it reappear in *M. blackburni*, but the females of the two species are so much alike that it appears to me impossible to separate them generically. In *M. australis*, Fauvel, the elytra are rather more closely and irregularly punctured than in *M. blackburni*, and the front tibiæ are simply tridentate, while in the latter there are one or two minute secondary teeth.

In the female of *M. australis* the pygidium is flat and in the male very convex.

The genus *Euetheola* was formed by Bates for the single species *Heteronychus humilis*, Burm., the author comparing it with *Dyscinetus bidentatus*, Burm. The latter insect, although differing from *E. humilis* in the thickened front tarsi of the male, is in other respects very closely allied to it. It differs entirely from *Dyscinetus* in its toothed clypeus and in the produced and exposed front part of the mandibles, as well as in its general aspect. The alternative is presented of transferring it to *Euetheola* or making another genus for it, and for the present I prefer the former course.

The following is a third closely related species:—

Euetheola latipennis, sp. n.

Nigra, nitida, elytris subopacis, brevis, postice lata, clypeo rugoso, antice angusto, bidentato, a fronte carina angulata divisa, fronte antice fortiter punctata, postice lævi; prothorace ubique grossissime punctato, toto marginato, lateribus fortiter arcuatis; scutello punctato; elytris haud profunde punctato-striatis, ad marginem anticum rectis, ad humeros acute prominentibus, postice dilatatis; pygidio grosse et confluentur punctato; corpore subtus nigro, nitido, lateribus rugose punctatis; tibiis anticis fortiter et acute tridentatis:

♂, tarsis anticis incrassatis, unguibus inæqualibus.

Long. 13–14 mm.; lat. max. 7·8 mm.

Hab. MATTO GROSSO: Chyaba; PARAGUAY: Sapucay.

The sharply angulated shoulders of the elytra, which are traceable in *E. bidentata*, Burm., are here much more marked, and the elytra regularly increase in width from the shoulders to near the extremities. Their semiopaque surface and shallow striation are also very distinctive, as are the very coarsely punctured prothorax and pygidium.

One specimen was taken at Sapucay by Mr. W. Foster, and I have received a considerable series from Messrs. Staudinger and Bang-Haas.

Pucaya pulchra, sp. n. (Pl. IV. fig. 7.)

♂. Castanea, capite prothoraceque obscurioribus, hujus lateribus (puncto mediano fusco excepto) punctisque duobus transverse ante basin positis flavis, elytrorum fascia obliqua a basi usque ad angulum suturalem, circum marginem externum fere ad humerum recurrenti, pygidique lateribus similiter coloratis: elongata, parallela, polita, capite rugose punctato, utrinque breviter acute cornuto, clypeo lato, margine recto, reflexo; prothorace transverso, vix punctato, medio leviter canaliculato, antice paulo retuso, lateribus fortiter arcuatis, angulis posticis obsoletis; elytris parce subtiliter punctatis, punctis nonnullis discoidalibus seriatis; pygidio lævissime punctato, sterno dense haud longe fulvo-hirto. Long. 20 mm.; lat. max. 10 mm.

Hab. COLOMBIA.

The single male specimen in the British Museum was formerly in the Reiche Collection. Although closely similar in all points of structure to the typical species of this genus (*Pucaya castanea*, Ohaus), its bright orange markings render it of peculiar interest and seem to indicate a diurnal habit, like that of the species of *Cyclocephala*, in which, almost alone amongst the Dynastinæ, similar patterns are found. *P. castanea* has the sombre colouring characteristic of the subfamily, and, as Dr. Ohaus has recorded, is nocturnal.

P. pulchra is smaller than *P. castanea*, much more hairy beneath, and with a faint and scanty puncturing of the elytra which has wholly disappeared in the latter species. The head, on the contrary, is less roughly sculptured, the clypeal margin is more reflexed, and the horns are very short but acute; as in *P. castanea*, they immediately adjoin the inner edge of the eyes. The prothorax in the unique type specimen is less humped than in the other species, but bears marginal and median depressions of exactly the same form though less deep.

It seems probable from the description that the small Peruvian species called *Cyclocephala nodicollis* by Kirsch also belongs to this genus.

Dyscinetus dytiscoides, sp. n. (Pl. IV. fig. 13.)

Longe ovalis, parum convexus, flavus, corpore supra olivaceo-nigro, clypeo prothoracisque lateribus flavis; capite subtilissime sat parce punctulato, clypeo subquadrato, antice leviter emarginato; prothorace vix fortius punctato, margine antico vix angulato, postico immarginato, lateribus bene marginatis; scutello impunctato; elytris æqualiter haud fortiter punctatis, seriebus quatuor geminatis punctorum, lateribus omnino arcuatis, apicibus sat angustis, paulo setosis; pygidio haud tecto, rugose punctato, setoso, utrinque impresso; pedibus gracilibus, flavis:

♂, tarsis anticis paulo incrassatis, ungue majore profunde fisso.
Long. 19–22 mm.; lat. max. 10–12 mm.

Hab. COLOMBIA, VENEZUELA.

This has a curious resemblance to a water-beetle of the genus *Dytiscus* in its outline and coloration, as well as in the texture of the surface. Its very elongate oval shape, the pale lower surface, legs, and sides of the prothorax produce an appearance which immediately distinguish it from every other known species of *Dyscinetus*.

Stenocrates ligneus, sp. n.

Castaneus, vertice utrinque prothoracisque maculis duabus magnis discoidalibus fuscis, elytrorum disco plerumque vage obscuriore, corpore subtus pedibusque flavo-castaneis; ovalis, parum convexus, fere nudus, pedibus brevissimis, clypeo rugoso, brevi, truncato, margine reflexo, antice subtilissime sinuato, vertice parce punctato; prothoraco grosse, haud dense, punctato, lateribus regulariter arcuatis; scutello punctato; elytris crebre punctatis, seriebus tribus discoidalibus punctorum regulariter geminatis; pygidio grosse punctato; corpore subtus levi, metasterni lateribus paulo punctatis; maris et foeminis fere similibus.

Long. 12–15 mm.; lat. max. 6–8 mm.

Hab. BRAZIL: Manaos, Ega.

This is an isolated species both in form and colour. It is the only not-black species known to me, and its closely punctured elytra give it an unusually dull appearance. Its short depressed form and very short legs in both sexes seem to indicate habits different from those of its congeners. The hind tibiae are rather less flattened than usual, and the clypeal suture, though well marked, is not carinate. The insect appears to resemble *Dyscinetus luridus*, Burm., in coloration, but the description of the pygidium &c. of that species shows that it is not the same.

A specimen was taken at Ega by H. W. Bates, and I have received a series collected at Manaos.

The insect for which Bates formed the genus *Barotheus* (*B. audinus*, Bates) appears to be without doubt the *Ancognatha castanea* of Erichson. The latter described the antennae as 9-jointed and the former called them 10-jointed, the fact being that, as in the species next mentioned, the number of joints is inconstant, and I have examined a specimen in which there are nine joints to the right antenna and ten joints to the left. The species must be called *Barotheus castaneus*, Er., Bates's name, as well as the name *peruana*, given by Harold, being synonymical.

Ancognatha aequata, Bates, is synonymous with *A. manca*, Lec., and the specimen to which the latter name was given by Bates (Biol. Centr.-Amer., Col. ii. 2, p. 298) is a variety or allied species in too fragmentary a state for exact determination. *A. manca* is described as characterized by having only nine joints to the antenna. This is due to the more or less complete fusion of the fifth and sixth joints, which occurs also in other species, but is not constant. When the fusion is incomplete the antenna appears either 9- or 10-jointed, according to the side on which it is examined. As in the preceding case, 9- and 10-jointed forms may be found in the same species, and in one specimen which I have examined one antenna must be described as 9-jointed and the other as 10-jointed.

Ancognatha vulgaris, sp. n.

The species of which both sexes were figured by Bates under the name of *A. humeralis*, Burm. (Biol. Centr.-Amer., Col. ii. 2, p. 298, pl. 17. figs. 13. 14), is a quite distinct species, although superficially very similar. I have seen a long series of *A. humeralis*, Burm., from Cauca, Colombia. In this form, as mentioned by Burmeister, the pygidium is smooth, with a thick tuft of hairs at the end. The species figured by Bates is larger and the pygidium is entirely clothed with hairs in the male and fringed in the female. The female has a very strong lateral lobe near the middle of each elytron, which is absent in *A. humeralis* and all other species of *Ancognatha* known to me. The unnamed species may be called *A. vulgaris*. It ranges from Panama to Peru and the Upper Amazons (Nauta).

Bates has associated two species as the two sexes of *Ancognatha quadripunctata*, Bates. I believe only the single male specimen figured really belongs to it. The other specimens are of very different appearance and not closely

related to the type. Both sexes of this species are represented in the British Museum, and I here describe it as

Ancognatha falsa, sp. n. (Pl. IV. fig. 10.)

Pallide testacea, clypei margine, utriusque lateris elevatione parva verticeque extremo, elytrorum utrinque maculis postscutellari et humerali genubusque nigris: supra nitidissima, capite subopaco, rude punctato, prothorace parce et minute punctato, haud lato, antice paulo angustato, elytris obsolete lineato-punctatis; pygidio parvissime punctato; utriusque sexus tarsis brevibus:

♂, pedum anticorum ungue majori apice minutissime fisso; pygidio parce fulvo-hirto:

♀, elytrorum lateribus haud dilatatis.

Long. 17-23 mm.

Hab. MEXICO: Peras, Capulalpam, Mexico City.

Although he did not record the locality, Bates also united with *A. 4-punctata* a specimen from Guatemala of another species allied to *A. falsa*. This is here described from examples of both sexes.

Ancognatha sellata, sp. n.

Longe ovata, postice sat lata, testacea, polita, capite toto infuscato, elytris antice nigro-maculatis, macula nigra postice ad marginum interiorum et exteriorum medium producta, tibiis extus tarsisque nigris; capite leviter minute punctato, clypeo longo, vix acuminato; prothorace scutelloque vix punctatis, illius lateribus a basi arcuatim approximatis, angulis posticis parum rotundatis; elytriis parvissime punctatis; metasterno dense, pygidio abdomineque parcius fulvo-hirtis.

Long. 18-24 mm.; lat. max. 10-12 mm.

Hab. GUATEMALA: San Marcos (El Rincon).

The sharp-pointed clypeus, falciform mandibles, and very convex prothorax of *A. 4-punctata* are wanting in this species as in *A. falsa*. It is very like the latter, but differs by the black head and large black patch occupying the anterior part of the elytra and produced to about the middle of the inner and outer margins. The sides of the thorax are less strongly rounded and the hind angles more marked. The two sexes are similar, the pygidium being thinly hairy in both.

Cyclocephala ocellata, Burm., was placed in the now-restricted genus *Ancognatha* on account of the clypeus, and was attributed by Burmeister to Mexico. It is a Brazilian species taken at Ega by Bates.

The name *nigrocephala* applied by Schönherr to Olivier's *C. melanocephala* (pronounced by Illiger to be distinct from the *melanocephala* of Fabricius) had been previously used by De Geer, and I have therefore called the species *G. olivieri*.

Cyclocephala stolata, Er., is evidently synonymous with *C. dispar*, Herbst (= *C. dorsalis*, Burm.).

Cyclocephala pubescens, Burm., must be added to the list of Central-American species, the examples from Nicaragua and Panama assigned by Bates to *C. lucida*, Burm., really belonging to the former, first recorded from Peru. It was independently described with the name *pubescens* by both Burmeister and Erichson; but Dr. Ohaus states that the types of both authors had the same origin, and, although the descriptions differ greatly, there is no doubt that they represent varieties of the same species. *C. pubescens* and *C. lucida* belong to a group of very closely related and variable forms which all pass through a range of almost identical colour-phases. The typical phase of *C. lucida* appears to be confined to Mexico. The specimens from Guatemala (Zapote) form a smaller and less spotted variety. *C. pubescens*, which replaces it to the south, is with difficulty distinguishable from this variety, but in the female the lateral lobe of the elytra forms a minute but very prominent tongue, whereas in *C. lucida* it is an obtuse angulation. The ædeagus of the male is rather more slender.

The following is another very closely related species :—

Cyclocephala venezuelæ, sp. n.

Rufo-testacea, nitida, capite toto, vittis pronoti duabus postice abbreviatis, elytrorum marginibus anticis et lateralibus (his postice abbreviatis), macula circumscutellari ad marginem connexa punctisque utrinque tribus, tibiis tarsisque nigris; capite sat fortiter punctato; prothorace elytrisque parce haud profunde punctatis; abdomine cum pygidio fulvo-hirto:

♂, pedibus anticis multo crassatis:

♀, elytris extus post medium obtuse dilatatis.

Long. 19–22 mm.; lat. max. 10–12 mm.

Hab. VENEZUELA.

This closely resembles *C. lucida*, but is rather more shining and scantily punctured. It differs also by its black head, tibiæ and tarsi, the two thoracic marks which reach the front margin, but are curtailed behind, and the black margin to the anterior part of the elytra, which unites with

the large juxtascentellar spots. It is equally closely allied to *C. tutelina*, Burm., in which the small elytral spots are absent and the lateral lobe of the elytra in the female is smaller and more abrupt.

Two species have received the name of *C. villosa*, the first being a Bolivian species of Blanchard's. I propose to substitute *borealis* for *villosa*, Burm., a North-American insect.

Chalepus leucophthalmus, Fisch., appears to me from the description to be *Cyclocephala melanocephala*, F., or one of the two or three closely similar species.

A peculiar sexual difference characterizing a large proportion of the species of *Cyclocephala* has been overlooked. It occurs in the mandibles, those of the male being conspicuously toothed externally at the extremity. This is very apparent in the following new species :—

Cyclocephala gregaria, sp. n. (Pl. IV. fig. 11.)

Nigra, prothorace, scutello, elytrorum macula utrinque media, vitta suturali juncta (hac apice plerumque dilatata), abdomine pectoreque plus minusve fulvis vel rufis; breviter ovata, corpore supra et subtus plus minusve fulvo-hirsuto (feminis autem interdum fere glabris); clypeo sat magno, antice truncato, rugoso, vertice punctato; prothorace parce subtiliter punctato; scutello paulo punctato; elytris inæqualiter haud profunde punctatis:

♂, subtiliter punctata, sat dense et longe pilosa, pygidio precipue, mandibulis apice extus recte reflexis, tarsis anticis crassis, ungue majori minute fisso:

♀, elytris grossius et magis seriatim punctatis, paulo hirsutis, pygidio nitido, parce punctato et hirsuto, elytrorum lateribus multo post medium valde angulatis.

Long. 17–21 mm.; lat. max. 9·5–11 mm.

Hab. COLOMBIA: Medellin (*Buckley*), Cauca Valley; ECUADOR: Macas (*Buckley*).

Var. *pallida*. Fulva, capite, pedibus, pectoris lateribus, elytrorumque marginibus a basi ad partem tertiam fuscis.

Hab. Medellin.

I have received this from Messrs. Staudinger and Bang-Haas with the unpublished name I have adopted. It is nearly related to *C. conspicua*, Sharp, but differs in its hairy clothing and immaculate pronotum. The markings are very variable. In one specimen the elytra are black, with a large quadrate reddish patch near the middle of each. Normally there is also a stripe of the same colour upon the posterior

half of the suture, becoming united with the median patches. The sutural stripe may become dilated along the posterior margin and the concurrent enlargement of the median patches ultimately reduces the black parts to very narrow limits.

The sexual differences are very marked. The male is much more hairy than the female and the latter has the elytra much more strongly punctured and very abruptly angulated behind the middle of the outer margin.

Cyclocephala rufovaria, sp. n. (Pl. IV. fig. 14.)

Nigra, prothoracis plagiis tribus (externis irregularibus, media lineata), scutello, elytrorum fascia mediana angulata maculaque rubapicali communi late V-formi fulvis vel rufis; sat breviter ovata, clypeo lato, truncato, transverse rugoso, fronte prothoraceque irregulariter haud dense punctatis; scutello paullo punctato; elytris irregulariter sed distincte punctatis; pygidio subtiliter parce punctato, late rufo-setoso:

♂, tarsi anticis crassatis, ungue majori minute fisso, mandibulis extus productis:

♀, elytrorum lateribus post medium acute angulatis.

Long. 17-19 mm.; lat. max. 9-10 mm.

Hab. ECUADOR (*Buckley*); PERU.

This also is closely related to *C. conspicua*, Sharp, and, like it, smooth and shining, but the abdomen, with the pygidium, is black and the pattern a little different. There is a black spot at each lateral margin of the pronotum and the two median black lines extend from the front to the hind margin, where, as well as at the middle, each gives off an external branch. There is no posterior red sutural stripe upon the elytra. In the female the elytra are very sharply toothed behind the middle of the outer edge, much more so than in *C. conspicua* or *C. gregaria*.

Cyclocephala carbonaria, sp. n.

Nigra, nitida, glabra, capite magno, clypeo fere semicirculari, antice impunctato, postice cum fronte et pronoto parce sed distincte punctatis; hoc lato, lateribus late marginatis, basi immarginato; scutello minute punctato; elytris parallelis, grosse punctatis, punctis plerumque in seriebus ordinatis, in lateribus et apicibus minoribus et irregularibus; pygidio modice punctato, apice fere lævi:

♂, pedibus anticis incrassatis, ungue majori valde incurvato, apice minute fisso; tibiæ dente supero recte truncato.

Long. 19.5-22.5 mm.; lat. max. 11-12 mm.

Hab. NICARAGUA: Chontales (*Janson*); PANAMA: Chiriqui.

Two specimens in the British Museum formed part of the Fry Collection, and a series was sent to me by Messrs. Staudinger and Bang-Haas. I have placed the species in *Cyclocephala* rather than in *Dyscinetus* on account of the large, smooth clypeus, of which the suture is obliterated, and the shape of the mandibles, which are bluntly produced in front. In its size, shape, and general appearance the insect resembles *C. variolosa*, Burm., but the clypeus is regularly rounded and the pronotum is not margined behind. The female is without the lateral expansion of the elytra occurring in that of *C. variolosa*, and another peculiar feature is found in the truncation of the uppermost tooth of the front tibia of the male.

Cyclocephala latipennis, sp. n. (Pl. IV. fig. 12.)

Piceo-nigra, glabra, nitida, lata; capite grandi, clypeo elliptico, margine alte reflexo, antice impunctato, postice cum fronte et pronoto minute et sparse punctatis, hujus lateribus paulo deplanatis, marginatis, basi immarginato; scutello vix punctato; elytris latis, latitudine maximo post medium; grosse haud crebre punctatis, punctis plerumque seriatim ordinatis; pygidio glabro, fere impunctato:

♂, tarsis anticis incrassatis, unguo majori valde incurvato, apice minute fisso.

Long. 25 mm.; lat. max. 14 mm.

Hab. ECUADOR: Macas (*Buckley*).

A single male was acquired with the collection of the late Alexander Fry. It is closely related to the species just described, but larger, much broader, and less strongly punctured, the head, pronotum, and pygidium being very smooth and shining. The last joint of the front tarsus (in the male type specimen) is of enormous size.

Cyclocephala liomorpha, sp. n.

Rufo-testacea, elytris late flavis, sutura marginibusque externis nigris, macula juxta-scutellari ovali, alia humerali, tertia magna mediana, his saturate brunneis, nigro-circumdatis, lineolaque apicali nigra; corpus elongato-ovatum, fere glabrum, clypeo semicirculari, subtiliter punctato-rugoso, fronte et pronoto nitidis, leviter punctatis, hoc transverso, antice angustato, angulis posticis toto rotundatis; scutello distincte punctato; elytris late sed distincte lineato-punctatis:

♂, pygidio subtiliter coriaceo, pedum anticorum tarsis crassis, ungue interno dilatato, minute fisso, tibia antica acute bidentata;

♀, elytris extus medio obtuse angulatis, pygidio crebre punctato, pedum anticorum tarsis simplicibus, tibia tridentata.

Long. 12-13 mm.; lat. max. 6.5-7.5 mm.

Hab. BRAZIL : Ega.

Two males and a female were collected by H. W. Bates. It is a pretty and conspicuous species, recalling by its colouring and superficial appearance one of the Erotylidae, or the similarly decorated Carabidae of the genus *Lia*, which inhabit the same region. The body and legs are of a brick-red colour, except the elytra, which are bright yellow and each decorated with four spots, of which the two anterior and the large median one are mahogany-red encircled by black.

Cyclocephala flora, sp. n. (Pl. IV. fig. 9.)

Læte testacea, vertice nigro, pronoti medio late brunneo, elytris rufis, singulo paulo ante medium macula magna flava circulari fusco-circumdato ornato; corpus ovatum, glabrum, clypeo parvo, subtruncato, rugoso, margine reflexo, fronte sat fortiter punctata; prothorace scutelloque nitidissimis, rare et minute punctatis, illo haud lato, antice angustato, angulis posticis omnino rotundatis; elytris ad ultra medium nitidis, subobsolete seriato-punctatis, deinde densissime et subtilissime rugosis, toto opacis; pygidio nudo, subtiliter parce punctato; tibiis anticis acute tridentatis:

♀, elytrorum lateribus post medium obtuse angulatis et callosis.

Long. 14.5 mm.; lat. max. 8 mm.

Hab. PERU : Nauta.

This peculiar and beautiful species is described from a single specimen taken long ago by Degand at Nauta on the Upper Amazons. It is a female and it is possible that the strongly contrasting opaque apical part of the elytra is a feature of that sex alone. I have described a similar, but much less developed, condition in the female of the West African *Ruteloryctes tristis*, and in an allied group the same sexual phenomenon appears in the Indian *Anomala rugosa*, Arrow. This peculiar surface distinguishes it immediately from all other known species of *Cyclocephala*, but its colouring is no less distinctive. It is yellow beneath and red-brown above, with broad lateral borders to the pronotum, the scutellum and a large round spot about the middle of each elytron are of a bright orange colour and the spots are broadly ringed with black.

Cyclocephala brevissima, sp. n. (Pl. IV. fig. 8.)

Nigra, singulo elytro macula antica sanguinea alteraque postica ornato, his plerumque confluentibus, aut immaculato; corpus latum, brevissimum, fere discoidale, subtus cum pygidio (elytris-que minutissime) fulvo-setoso; capite parvo, modice punctato,

clypeo angusto, truncato, prothorace nitido, convexo, ubique minute punctato, lato, lateribus fortiter arcuatis, angulis posticis rotundatis, basi medio breviter lobato; scutello punctato; elytris sat crebre et æqualiter rugoso-punctatis, lateribus postice densius; pedibus brevibus, tibiis anticis acute tridentatis, dente superiori parvo, sed acutissimo, prope basin obsito:

♂, clypei margine valde reflexo, tarsis anticis crassissimis, ungue majori dilatato, minute fisso:

♀, elytrorum marginibus post medium subito contractis.

Long. 14·5–16; lat. max. 8·5–9 mm.

Hab. GUIANA: Cayenne; BRAZIL: Para.

This species occupies a very isolated position by its exceedingly short and broad form and the toothing of the front tibia; the latter is very short and has its uppermost tooth near the base and small but very sharp. The elytra may be entirely blood-red, except the margins, the red colour may divide into an anterior and posterior patch upon each, or the whole body may be black.

The figures of *Cyclocephala* and allied forms upon Plate IV. accompanying this paper serve only to indicate their outlines, the red and yellow colours appearing black upon the photograph. Upon Plate V. have been included figures of *Golofa antiqua* and *argentina*, described by me in the last volume of this Magazine (pp. 138, 139).

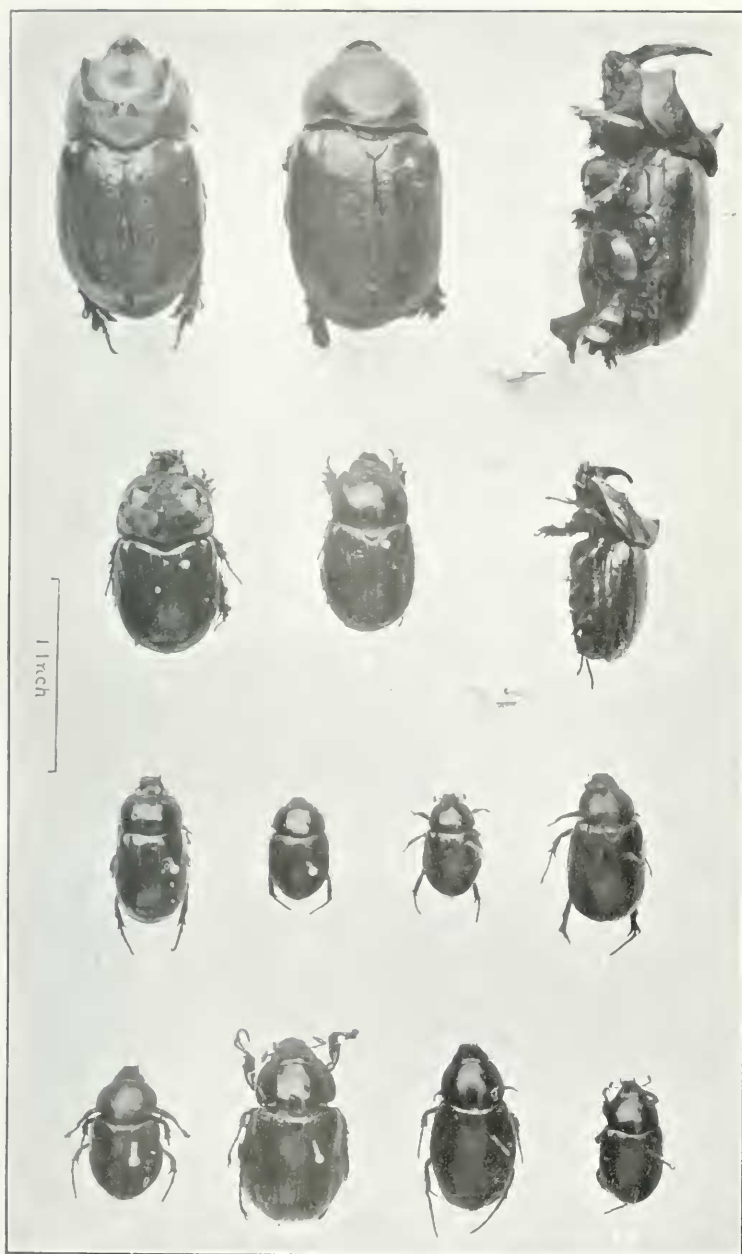
EXPLANATION OF THE PLATES.

PLATE IV.

- Figs.* 1, 3. *Dipelicus borneensis*, sp. n., ♂.
Fig. 2. — — —, ♀.
Figs. 4, 6. *Papuana semistriata*, sp. n., ♂.
Fig. 5. — — —, ♀.
Fig. 7. *Pucaya pulchra*, sp. n.
Fig. 8. *Cyclocephala brevissima*, sp. n.
Fig. 9. — — — *flora*, sp. n.
Fig. 10. *Ancognatha falsa*, sp. n.
Fig. 11. *Cyclocephala gregaria*, sp. n.
Fig. 12. — — — *latipennis*, sp. n.
Fig. 13. *Dyscinetus dytiscoides*, sp. n.
Fig. 14. *Cyclocephala rufovaria*, sp. n.

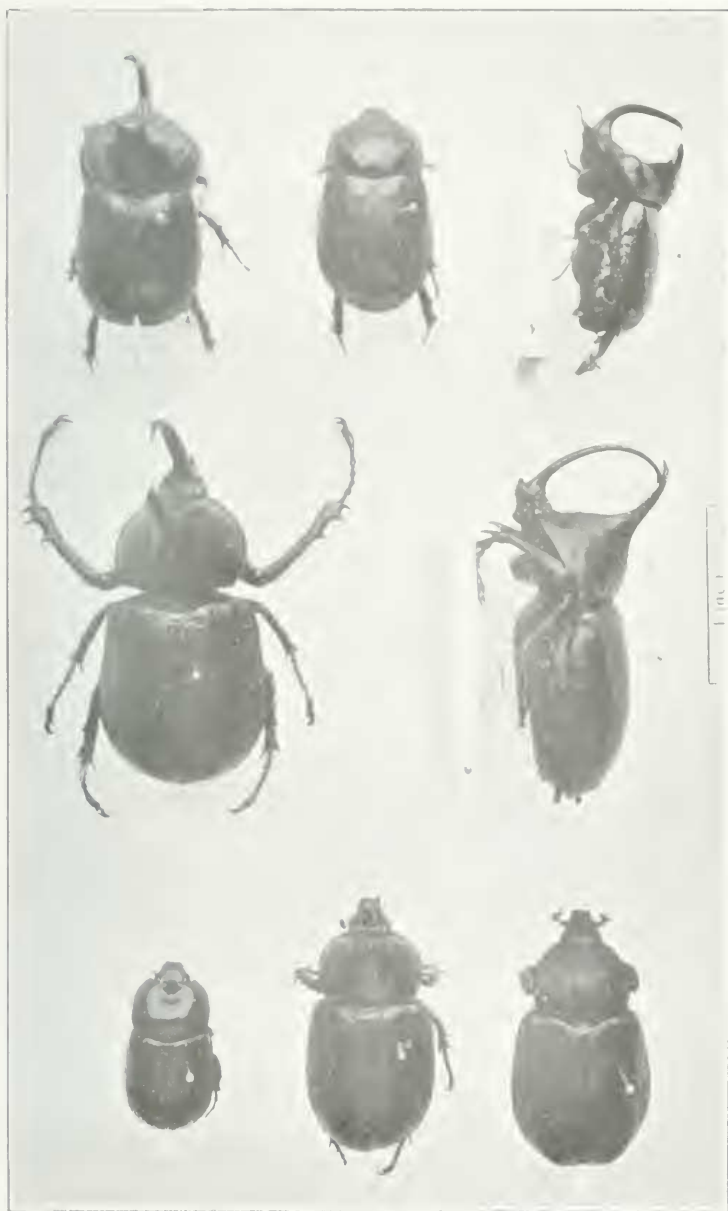
PLATE V.

- Figs.* 1, 3. *Dichodontus fissicornis*, sp. n., ♂.
Fig. 2. — — —, sp. n., ♀.
Figs. 4, 5. *Golofa antiqua*, Arrow, ♂.
Fig. 6. *Pseudohomonyx crassus*, sp. n., ♂.
Fig. 7. *Golofa argentina*, Arrow, ♂.
Fig. 8. — — —, ♀.



DYNASTINÆ.

(Natural size.)



DYNASTINÆ.

(Slightly reduced.)